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EDUCATIONAL TECHNOLOGY AND THE DISADVANTAGED ADOLESCENT.

BY- TURNEY, DAVID
EDUCATIONAL MEDIA COUNCIL INC., WASHINGTON, D.C.

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DESCRIPTORS- *DISADVANTAGED YOUTH, *MASS MEDIA, *INSTRUCTIONAL TECHNOLOGY, *COMMUNITY ROLE, *INSTRUCTIONAL MATERIALS, SCHOOL COMMUNITY RELATIONSHIP, PROGRAMED INSTRUCTION, EDUCATIONAL TELEVISION, TEACHER ROLE, ADMINISTRATIVE CHANGE, PROBLEM SOLVING, INTERPERSONAL RELATIONSHIP, SIMULATION, CLASSROOM GAMES,

SINCE THE CULTURALLY DISADVANTAGED STUDENT OFTEN MANIFESTS AN AVERSION TOWARD THE ACADEMIC AND HIGHLY INSTITUTIONALIZED EDUCATIONAL PROCESS WHICH NOW EXISTS, EDUCATORS MUST EXPLORE THE POSSIBILITIES INHERENT IN EDUCATIONAL TECHNOLOGY TO MAKE THIS PROCESS LESS FORMAL. PROGRAMED MATERIALS AND OTHER SELF-TUTORING DEVICES ADAPTED TO THE LEARNING NEEDS OF THE DISADVANTAGED YOUTH WILL CREATE A RESPONSIBLE AND RELIABLE LEARNING ENVIRONMENT VOID OF THE HUMAN AUTHORITY WHICH THIS STUDENT RESENTS. IN TIME, HOWEVER, THE DISADVANTAGED AND ALIENATED STUDENT MUST BE HELPED TO FIND HIS WAY BACK INTO THE HUMAN COMMUNITY OF LEARNERS. TO THIS END SOME HOPEFUL POSSIBILITIES ARE PROVIDED IN THE FORM OF SIMULATION GAMES IN WHICH GROUPS OF STUDENTS ENGAGE IN COOPERATIVE PROBLEM-SOLVING ACTIVITIES. WITHIN DISADVANTAGED NEIGHBORHOODS VISUAL AND PRINTED MEDIA MATERIALS MUST BE MADE AVAILABLE, AND NEIGHBORHHOD COMMUNICATIONS ENTERPRISES SHOULD BE ESTABLISHED. ALSO, EDUCATIONAL TELEVISION FACILITIES COULD BE EXPANDED TO INCLUDE SKILL DEVELOPMENT PROGRAMS AND PROGRAMS WHICH PORTRAY SUITABLE ADULT MODELS AND "HIGHER HORIZONS" EXPERIENCES. IN THESE PROGRAMS A DIRECT-LINE TELEPHONE SHOULD BE AVAILABLE TO THE AUDIENCE FOR "TALKING BACK" TO THE TELEVISION STUDIO. HOWEVER, TO MAKE THE SCHOOL LESS INSTRUCTIONAL, TO CHANGE THE "COMMUNITY-SCHOOL" INTO THE "SCHOOL-COMMUNITY," EXTENSIVE ADMINISTRATIVE, FINANCIAL, AND CURRICULAR CHANGES MUST BE MADE. IN PARTICULAR, THE CONTINUITY BETWEEN IN-SCHOOL AND OUT-OF-SCHOOL LEARNING EXPERIENCES MUST BE CAREFULLY ESTABLISHED. THIS ARTICLE IS APPENDIX B TO THE EDUCATIONAL MEDIA COUNCIL STUDY OF THE CONCENTRATION OF EDUCATIONAL MEDIA RESOURCES...., PART I--EDUCATION OF THE CULTURALLY DISADVANTAGED, FINAL REPORT. (LB)

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APPENDIX B

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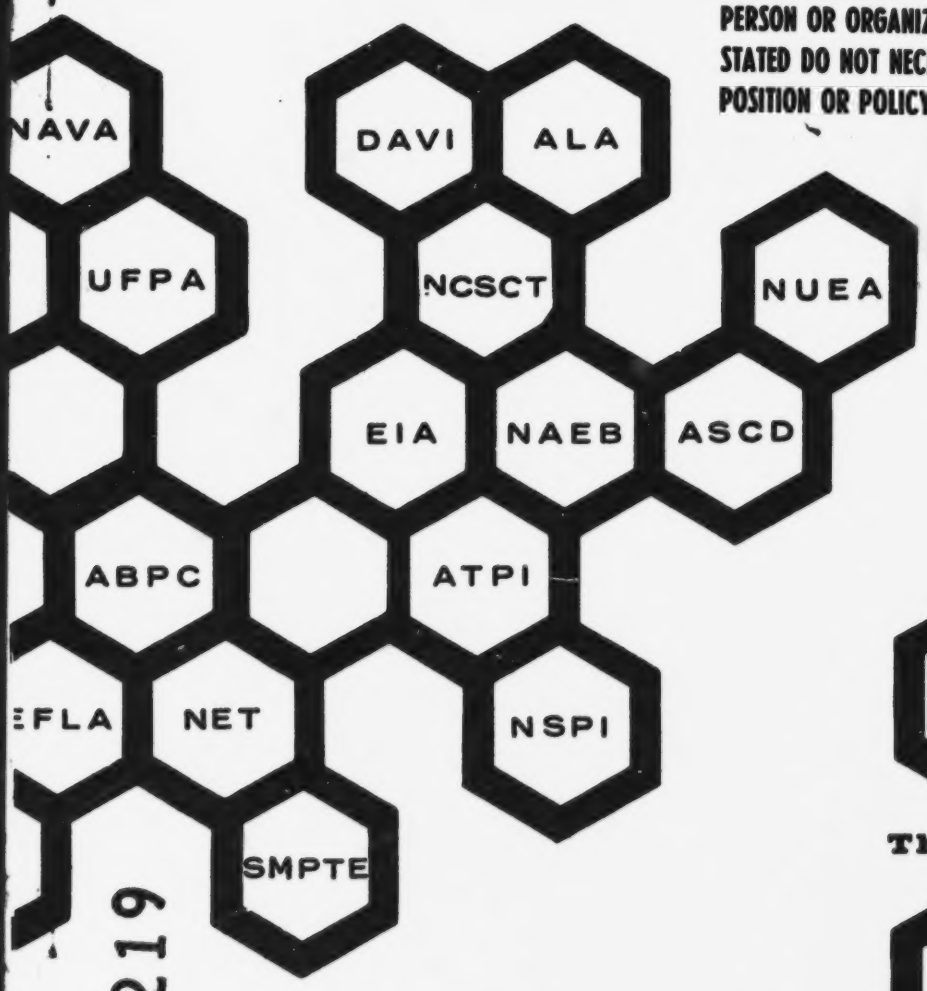

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A STUDY OF THE CONCENTRATION OF EDUCATIONAL MEDIA RESOURCES TO ASSIST IN CERTAIN EDUCATION PROGRAMS OF NATIONAL CONCERN

PART I: EDUCATION OF THE CULTURALLY DISADVANTAGED

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U.S. DEPARTMENT OF
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Office of Education
Bureau of Research

EDUCATIONAL TECHNOLOGY AND THE DISADVANTAGED ADOLESCENT*

by
David Turney

At a time when the quick-step march of technology continually dictates change in the very nature of our existence, we educators study the technological revolution looking for ways that the fruits of our scientific knowledge can be harnessed for the improved solution of fundamental educational problems that have been with us so long. Presently, much of our effort seems related to concerns of quality in intellectual development and we read of attempts to correct English themes through the use of computors and of large scale plans for information retrieval and storage.

Is it possible that among these new technological approaches to education that there are some applications peculiarly suited to youth who enter and live in our schools with specific disadvantages? An attempt will be made in this essay to develop some useful hypotheses as to ways in which the new educational technology may be uniquely adapted to the learning needs of adolescents with specific learning disabilities.

I

The literature on culturally different youth--especially those from the inner-cities--is replete with examples of the adolescent who appears to mistrust most adults. We also note that this lack of ability to relate to adults is often coupled with an additional distrust of the school and teachers as representatives of the central forces of the external culture that is held responsible for most of the sub culture's difficulties. The drop out and pre-drop out usually detests school and teachers with a passion. It is as if, through repeated failure and disastrous personal experience, these young people have become sensitized against schooling and all that it has come to mean to them. It is also likely that human intervention in the educational process is closely associated in their minds with this built-in aversion.

This line of thinking leads to our first hypothesis: <u>If the teacher has come to be associated by youth with failure and unpleasant experiences, then the most fruitful fresh approach to the education of such persons should involve as little human intervention in the learning process as possible.</u>

If the human element appears to be a major source of interference in the learning process, why not shift to nonhuman approaches for our new beginning?

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*A paper prepared for the Educational Media Council, Inc.

What we have in mind here is an array of programed materials, self tutoring devices and responsive environment approaches to learning. This is not to argue that such nonhuman, technological approaches to learning are superior for all learners in all situations but only to suggest that for some youth in some situations they may be the only accessible route to learning at a particular time. Programed approaches which are closely keyed to pupil capacity, which have no power to reproach or punish and which are a reliable source of reward for successful responses, may represent the only kind of learning situation that appears "safe" enough for adolescents who have learned well the lesson that adults are not to be trusted.

Thus far the learning program does not respond to an erroneous answer by sending notes to the principal or to the parent. It cannot, by employing subtle, nonverbal, means imply any dislike or rejection of any particular pupil. The pupil never has to wait his turn to be called upon for response, and he never need wave his hand frantically to attract the glance of a teacher whose attention may be ordinarily directed to the more comely, the more brilliant or the more docile. Finally, an earned reward is never withheld because the pupil doesn't have the "proper attitude."

Unfortunately, the bulk of programed material available thus far has not been designed with the needs of the disadvantaged child in mind. We need a variety of programs aimed at the development of skill in handling symbolic processes such as language, mathematical symbolic systems, musical notation and the like. Some of these programs should be available in the responsive environment format such as that used by Moore in his "talking typewriter" approach to reading instruction. The presentation of learning programs by means of the sound filmstrip should be given extensive trials with disadvantaged pupils.

Additional programs aimed at the development of contextual meaning are badly needed for use with the alienated adolescent. The program must present more than just the symbols and the inter-relationships between symbols; it must also surround the symbol with an array of illustrative auditory and visual cues that will assist the learner to attach meaning to the symbols presented.

Further, the programs used with youth who view the school and teacher with distrust must be aimed at learning goals suitable for learners with these disadvantages. The hardware itself is nothing more than a medium or facility for the solution of a particular set of problems. It is on the software, the learning program itself, that we must focus our attention and effort. What is really needed is a thorough going curriculum revision including the establishment of realistic and attainable goals, sound program design and accurate evaluation of pupil accomplishment. We must abandon completely the practice of placing pupils in courses of study for which adequate skill development has not been completed. We must desist

in our practice of expecting pupils to respond to learning experiences when essential prerequisite knowledge or information has not been supplied. We must eliminate pressure applied to the psychologically maimed and the physically inadequate, and heal before we teach.

When we consider the handicaps of some of the pupils who come to us from disadvantaged areas, it is evident that even the nonhuman new beginning will be inadequate for some. This leads us to two corollaries of our first hypothesis:

1. Initially, the learning setting and process should resemble formal schooling as little as possible.

2. Initially, the book learning format of formal education should be kept at a minimum.

Healing for damaged youth will require an atmosphere different from that normally suitable for teaching. Not only have we offered a standard set of learning experiences to the disadvantaged adolescent, but we also appear to have assumed that a standard living environment will be equally desirable for all pupils. Obviously some youth will first require some time in a special setting where the goals are nonacademic rather than procedural. For some we can be sure that their out-of-school environment has been so chaotic and unpredictable that they will need to live for a while in a setting where the rules are simple and completely reliable--where a new pattern of living can be experienced and understood--where some degree of societal order can be developed on a very simple basis. Within such a setting the responsive environment can be introduced slowly and carefully as the pupils gain courage and security.

II

Programmatic approaches to group learning situations are surely possible, and are essential if such youth are ever to move from learning in a tutoring context to the group-centered procedures in which most conventional instruction takes place.

Once the learning process can be re-started for the educationally alienated, the problem of rebuilding effective human relationships may be approached, or perhaps implemented, at about the same time.

The disadvantaged and often alienated adolescent must be helped to find his way back into the human community of learners. He must be

assisted to reconstruct the human links in the educational process. Technology can teach, but it cannot inspire. It has capacities, but human warmth is not among them. It can help you learn the "bag of tricks", but it cannot give you clues as to how these capabilities are to be employed in human intercourse.

Our problem here is to consider how technology might help the disenchanted pupil rebuild his ability to communicate with other human beings, to assist him to construct some reliable bases for human trust and understanding, and to modify his own self-image in a positive direction through the reflections of self he can observe in others he has come to respect.

To do this we must bring groups of such individuals together and contrive ways in which such aims as listed above can be achieved.

This leads us to our second hypothesis, which is: <u>If the pupil is mistrustful and alienated from other human beings, then situations in which he must select courses of action in concert with other youth and/or adults should require him to develop the interpersonal understandings and mutual confidence essential to effective human relationships</u>.

For this undertaking we see some hopeful possibilities in the form of simulation games in which groups of pupils are engaged in cooperative problem-solving within the game context. The usefulness of simulation games in business education now appears to be well established, although the central concern in the development of this technological approach to learning has been the development of problem-solving abilities. It is possible that this same learning context could be quite useful for the development of the interpersonal knowledge and mutual confidence that is generally a prerequisite to effective human relationships.

Games have always been a medium through which we learn about others. In bridge, for example, we can learn much about the relative dependability or capriciousness of a partner. In more complicated games such as chess, one quickly discerns clues to the opponent's life style. But beyond this, the games in which a group must work for some common goal have exceptional capabilities for fostering interpersonal learnings.

The simulation game has a number of characteristics that may render it ideal for the development of interpersonal learning. First, games can be planned so that the group playing can always see some measure of success as a consequence of its actions. Second, failure, when it is introduced, is borne by the group and not the individual. Third, the rules of

the game constitute what Marie Hughes has called public criteria which are nonjudgmental in their consequences. Fourth the motivational pull of a well-devised game is very powerful. Fifth, the simulation game is usually a reasonably close approximation of reality which should provide an easy entrance for the pupil who functions at a relatively low level of abstraction.

Simulation games now available commercially have not been devised with the needs of the alienated child in mind, but the very kinds of games that would be most useful would probably be considerably less sophisticated in design than those presently employed in business training.

Current applications of the simulation technique that suggest how suitable modifications could be made for the purposes specified here are exemplified in the Inter-Nation Simulation Game produced by Science Research Associates and the War and Peace Game described in the November, 1966, issue of Social Education.

The simulation applications for educational purposes developed by Bert Kersch and Associates in Monmouth, Oregon, give additional testimony to the rich possibilities in this medium.

Couple these technological possibilities with what we know now about role playing, socio drama, and the wealth of personal interaction that can be developed through well-planned field experiences; and we have at least a foundation of techniques upon which the rebuilding of interpersonal relationships may be erected.

In this connection the central problem in development of the games would be to make them at the beginning wholly pertinent to the pupils' reality now -- while, over a period of time, leading them toward long-term but realistic dreams and hopes. Boocock and Coleman, in Sociology of Education, Summer 1966, have much to say that is relevant to this problem.

III

Thus far major attempts to provide compensatory educational experiences for children living in urban subcultures have been developed within institutional settings. That is to say, children have been removed from the home and neighborhood milieu and grouped together in some center where a new and different environment and experiences have been provided. An alternative approach could be mounted by saturating the

neighborhood with communication media designed to provide the compensatory experience in an informal way.

If it is correct to assume that the disadvantaged are wary and distrustful of all institutions including the school, we are led to our third hypothesis, which states that: If the subcultures from which children enter our schools are barren of printed and visual materials, then a saturation approach to this problem within the neighborhood should mediate this source of disadvantage.

In this connection we would think first of a vastly expanded educational television facility in which programming would focus sharply on providing the following kinds of viewing:

First, types of skill-development programs could be devised that would present verbal symbols within a rich context of meaningful pictorial illustrations. It would appear theoretically possible to program such presentations so as to help children and youth build an array of meanings for many of the abstract terms they will have difficulty learning without the wealth of association most children have available. Further, it could be very useful to present programs in which written text and spoken word are presented simultaneously, and in which the spoken cues could be progressively faded. Again, a "game" context could be used for programming purposes.

Second, programs could be devised that would make truly admirable models of adult male and female behavior available for the viewing of young persons. Inner-city youth so often lack suitable models of male behavior, and those female models present in the home may often be distorted because of the environmental pressures in which they must manifest themselves. Suitable portrayals of adult roles could be developed through the use of conflict situations that would not only be constructive as models to emulate, but would also be first-rate drama.

Third, programs could be devised that would help adolescents learn what it is possible for them to become in this bewildering world of ours. A set of types of "higher horizons" experiences on television that would also be biographic in nature, featuring persons whose antecedents lie in a disadvantaged area, could reveal both the varieties of possibility open to youth and some routes through which others had made their way toward these distant goals. Long-term motivation must ultimately rest in part on dreams and hopes. Surely we are clever enough to devise the kinds of programs from which such dreams can be spun.

There is, however, one very real danger inherent in the heavy use of television in disadvantaged neighborhoods. It appears to be characteristic of both children and adults in such areas that they are basically controlled by their environment. One sees few attempts by those who live in deprived subcultures to change either their physical or social environments. Simple clean-up campaigns, for example, are mounted only through great effort, and are soon dissipated once external pressure is removed. These people seem either to lack techniques for dealing with their environment, or else to be so thoroughly disillusioned concerning the effectiveness of their tactics that they no longer feel they are worth trying.

Television is at present a nonresponsive medium, and heavy use would simply add to the individual's environment another component over which he had no control.

Perhaps we should consider adding to the television set that already exists in most of the homes a telephone direct-line to the television studio with a simple dial marked like those in hotels so that the viewer could, by dialing, call for advice or information, and react directly to programs that were transmitted over the system. The current popularity of "talk-back" programs on radio suggests that the possibility of influencing the course of events being listened to is intriguing to the public. If an individual could communicate his feelings about a presentation viewed to another person whose reactions could be seen, this would provide instantaneous confirmation of his ability to influence the course of events through his own efforts.

The technical difficulties involved in providing such a responsive system do not seem to be insurmountable.

The success of the paperbound book publishing venture suggests another technological approach to learning for use within the neighborhood setting. Strategically located small bookstalls within an inner-city community could be stocked with paperbound editions of these stories that teachers of disadvantaged youth have already found to be especially appealing and interesting.

Abandoned store buildings or mobile vans could be used ad distribution sites for this enterprise with persons from the neighborhood employed as attendants.

Obviously, new materials could be created to fit the special needs of these adolescents. Such a venture would need heavy subsidization, with the materials selling for as little as a penny a copy.

In addition to providing merchandizing outlets for these materials, it would be interesting to establish duplicating centers throughout the neighborhood, where neighborhood newspapers, children's writings, signs, posters and other types of communication could be published. If one of our purposes in education is to initiate disadvantaged youth into the print culture of the dominant community, why not develop an indigenous print culture in the disadvantaged neighborhood?

If we wish to make interesting reading material available to our young people in neighborhood book stalls, why not have some of it written by the people in the neighborhood? This would be one simple way to insure that the content of the materials would reflect the values and problems of the neighborhood culture.

In a like manner, a neighborhood radio station or television station could be used to develop communication within a specific area. Programs developed by residents of the neighborhood should, over a period of time, change the attitudes of all residents toward the value and importance of human communication.

Lastly, it might be possible to develop neighborhood automated-learning centers where programmed devices of all types might be set up--some for free play and perhaps some that could be played with tokens that could be redeemable for small prizes.

It could be objected that the cost of developing the decentralized neighborhood approaches described above would be prohibitive; however, present federal programs aimed at these segments of our population are already costly; and as yet, there is no solid evidence of their effectiveness. Our third hypothesis, previously stated, is at least as plausible as the one underlying the Head Start efforts, and should be worth testing in at least a pilot effort.

IV

Some of the possibilities outlined in this paper imply that some relatively fundamental changes in educational administrative design would have to be created in order to implement the proposals made. Unless

new and separate educational agencies were created, the organizational structure of present school systems would have to be modified to support the developments proposed.

Our fourth hypothesis follows, and states that: If we attempt to de-institutionalize the educational processes, radically different administrative approaches and procedures will have to be devised.

If we attempt to use the neighborhood arena for educational purposes, it is quite likely that many young people would not be participating, at least regularly, in the institutionalized educational process. This would present a major problem in pupil accounting, and would render present systems of financial support virtually unworkable. Perhaps some method of checking participation using pre-punched IBM cards that could be collected in many centers and collated at some central point could be employed. Financing might be based on a unit use basis.

Again the logistical problems involved in devising educational processes for the neighborhood arena would be staggering, to say the least.

For example, the library-stockroom problem becomes formidable once we really move to an individualized programmed approach to learning. The problems involved in the development of specialized learning materials needed by individuals would dictate that the curriculum development facilities of a school system be vastly expanded. Such an approach to the education of the disadvantaged should require a learning resources center of far greater potential than anything we have attempted thus far. Such a development as envisaged here suggests that the roles of the assistant superintendent in charge of instruction, the educational research bureau director, the school psychologist, educational media specialist, and librarians would be far more important than they are at present.

On the shoulders of the assistant superintendent in charge of instruction would fall the tremendous task of insuring continuity between the in-school and out-of-school components of the educational establishment. Not only would mechanisms for pupil mobility between the two components have to be devised, but also continuity between out-of-school and in-school learning would have to be provided for.

The establishment of a large sector of the educational enterprise outside of the institutional setting would, of course, multiply difficulties for the educational researcher. Process variables would be multiplied

and confounded, making causal relationships even more difficult to establish than they are at present. Further, we would expect the educational researcher to play a prominent role both in the definition of measurable goals for the system and in the construction of useful measurement tools for the processes set in motion.

In concert with the educational researchers, the school psychologist would surely become deeply involved in the production of specific learning materials as well as the diagnosis of curriculum needs. One might anticipate that psychological clinical work with youth might be combined with what is now categorized as "guidance", and constitute a field of work separate and different from that of the educational psychologist who would be primarily a learning specialist working principally on program construction.

The educational media specialist would probably move into the neighborhood setting, and coordinate his work there with the school system center. Maintenance problems would become vastly complicated, and complete mobility would be absolutely essential.

One cannot even contemplate the solution of the problems confronting a librarian in the out-of-school educational setting without thinking of the use of data processing. Inventories would grow like toadstools, and present methods of processing and accounting would be hopelessly inadequate for the task at hand. The present thinking about security and preservation of holdings would have to be abandoned. One might very well evaluate the success of the librarian in this situation by the number of books and other materials he reported as stolen during the year.

In summation, then, we would anticipate the necessity of developing for the two-component school system an entirely new administrative pattern based upon an entirely new and different set of administrative goals.

Above all else, any attempt to move in some of the directions discussed in this paper would call for a level of competence on the part of the chief school administrator such as we have seldom seen. Such an operation as described herein would require a degree of creativity, wisdom, and clarity of purpose that would guarantee a continuous high level of encouragement, permissiveness, and financial support to all subordinate officers.

V

In attempting to relate the possible benefits of an increased and sharply focused use of educational technology for the education of the disadvantaged, the function of the teacher has been initially and purposely excluded. Actually, this approach to the education of the disadvantaged would have the effect of changing the role of the teacher in such a way as to make him quite indispensible. The procedures we have considered here would make it possible for the teacher to step out of the role of protagonist or adversary, and assume the character of a learning diagnostician, a source of psychological support, and a bridge between the world of the disadvantaged and the greater adult society. No matter how it may be initiated, learning for all youth must ultimately become an intensely human preoccupation. The teacher as the understanding adult who knows the learner through his learning behavior -- and also as a fellow human being -- is the crucial agent through which the metamorphosis of the disadvantaged youth must be accomplished. By engaging the adolescent as fully as possible with the curricular stimuli, we are in a position to move the teacher outside of the center of engagement, where he can study the learning process, react to the product of study, prescribe specific remediation needed, and support and encourage the learner in those intimate human ways that will always be crucial for the individual. The learner must come to understand that he need not "make it" with the teacher; he only needs to progress with the learning tasks presented. The teacher must come to be seen as his ally and support in his undertaking. The teacher will no longer have to "tell" or "judge," but simply guide and support the learner in his own efforts to make sense out of the work he has inherited.

VI

In conclusion, what we have advocated in this paper can best be summed up by reversing a time-honored label in professional education. Instead of the community-school, we propose the "school-community." Let us de-institutionalize the educational process for the disadvantaged. Let us employ in our new design every technological device that lends itself to our purpose; and, by so doing, let us concentrate our finest efforts on the goal of changing the neighborhood environment of the disadvantaged from one that is intellectually sterile to one that is exciting and vibrant with intellectual ferment.